Appl. No. 10/026,935
Amdt. dated July 22, 2005
Reply to Office Action of Apr. 22, 2005

REMARKS

The Applicants and the undersigned attorney wish to thank Examiner Tran for the courtesy of a telephonic interview on Tuesday, July 5, 2005 to discuss the April 22, 2005 Final Office Action and the novelty of the pending claims over the prior art of record.

In the April 22, 2005 Final Office Action, the Examiner allowed Claims 92-101 and stated that Claims 6, 8, 29, 52, 54, and 70-75 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, the Examiner continued to reject remaining Claims 1, 2, 4, 5, 7, 9, 12, 13, 16-23, 47, 48, 50, 51-55, 58, 59, 62-69, and 76-91 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,760,781 to Kaufman ("the Kaufman '781 Patent"). During the July 5 telephonic interview, the rejection of the pending claims was discussed, with emphasis on independent Claims 1 and 47.

Applicants' attorney explained that the Kaufman '781 Patent was directed to a system for processing three-dimensional data using ray casting techniques that are used to project three-dimensional data onto a two-dimensional display screen. As a result, the display buffer in Kaufman is a 2-D buffer storing (x,y) pixel information. In contrast, it was pointed out to the Patent Examiner that Applicants' invention is directed to generating three-dimensional image data that is displayed on a three-dimensional volumetric display having a plurality of display screens, such that each displays a corresponding "slice" of the three-dimensional data. As such, the display buffer is three-dimensional since it has to not only store (x,y) pixel information but also depth (z)

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information which is used to determine on which of the plurality of display screens a particular (x,y) pixel will be displayed.

As a result of the July 5 telephonic interview, the Examiner indicated that the pending claims would be allowable over the Kaufman '781 Patent if the term "display elements" in independent Claims 1 and 47 were amended to recite "display surfaces" to clarify the three dimensional display aspect of this invention. The Examiner asked the Applicants to file a Request for Continued Examination with appropriate amendments to the pending claims. Such amendments have been made herein to Claims 1 and 47, together with some additional minor language changes to Claim 1 to help further clarify the distinction between the claimed invention over the prior art Kaufman '781 Patent. Further, all dependent claims that refer to "display elements" have been amended to recite "display surfaces" and thereby provide proper antecedent basis.

As the Examiner will recognize from his consideration of the application and the prior art, while the Kaufman '781 Patent takes three-dimensional data and converts it to two-dimensional image data for display on a single screen, the present invention takes three-dimensional data and converts it to three-dimensional image data for display in three dimensions using a plurality of display screens. The third dimension (i.e., the depth dimension) is used to determine on which of the plurality of display surfaces a particular display pixel will be displayed. For this display purpose, the three-dimensional image data to be displayed is stored in a multiplanar frame buffer in accordance with the depth coordinate information, as required by independent Claims 1 and 47. In contrast, while the Kaufman '781 Patent uses a cubic frame buffer for initially storing three-

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dimensional data, this three dimensional data is ultimately converted in accordance with

the processing algorithms disclosed therein to two-dimensional image data that is

displayed on a single display surface.

For the reasons provided above and as further detailed in the Remarks to

Applicants' prior November 29, 2004 Amendment, Applicants respectfully submit that

none of the pending claims in the present application, as amended herein, is anticipated

by the Kaufman '781 Patent, because the '781 Patent does not disclose, either expressly

or inherently, a three-dimensional volumetric display for displaying three-dimensional

images or a multiplanar frame buffer that stores three-dimensional image data that is

displayed on a three-dimensional volumetric display having a plurality of display

surfaces.

In light of the foregoing amendments and remarks, Applicants respectfully request

that the rejection be withdrawn and that a timely Notice of Allowance with respect to all

of the pending claims be issued.

Included herewith is a Request for Continued Examination and a check in the

amount of $395.00 to cover the fee for filing the same for a small entity. No additional

fees or extensions of time are believed to be due. However, authorization is given

hereby to charge Deposit Account No. 01-1785 for any deficiency in fees necessary to
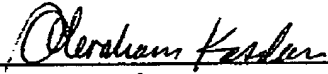
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preserve the pendency of the subject application, or to credit the same in case of

overpayment.

Respectfully submitted,

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Dated: New York, New York   By: ___*Abraham Kasdan*_____

         July 22, 2005   Abraham Kasdan
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